UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,442	01/27/2004	Joseph Bobier	P031696-08UT	1543

26376 7590 05/09/2007

DENNIS L. COOK, ESQ.
THE LAW OFFICES OF DENNIS L COOK PLLC
12718 DUPONT CIRCLE
TAMPA, FL 33626

EXAMINER	
BOCURE, TESFALDET	
ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
05/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/765,442	BOBIER ET AL.	
	Examiner	Art Unit	
	Tesfaldet Bocure	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 are pending in the Application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1- 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (US patent number 5,789,991, or a record) in view of D.A Perreault, Perreault hereinafter, (US patent number 3,555,428, newly cited).

Ishii teaches a transmission system having a transmitter (fig.3) and receiver (figs 6-9 and 11-13), wherein the transmitter comprising: a carrier frequency generator (see OSC in fig. 3 as in claim 5) for generating carrier wavelets each defined by 360 degrees

and each cycle having zero crossing with zero energy at each zero crossing (see each of the sine waves modulated by the binary signals in fig. 5); and modulating the carrier frequency according to the information signal to be transmitted, and each of the carrier modulated with the 0's and 1' having a corresponding high and low frequency carrier, claimed altered and not altered respectively (see for example col. 1, lines 10-37) as in claims 1,3 and 5; and transmitting (claimed broadcasting in claim 3) the frequency shift keying modulated signal as in claims 1,3 and 5.

The claimed integer cycle in claim 3 includes whole number of cycles and reads on the modulated carriers in figure 5.

What Ishii fails to teach is that the change in frequency from the carrier frequency waveform to the altered wavelets starts at the zero degree phase angle and ends at 360 degree phase angle (best interpretation of the claimed language in light of the specification, single sign wavelet) as in claims 1 and 3, and the shaping circuit for shaping the harmonic of the lower frequency square waveforms and minimizing harmonics as in claims 2,4 and 6.

Perreault for the same endeavor as the instant application and that of Ishii teaches a frequency shift keying modulator, where the two frequency, each having a single waveform (see a and b output from the frequency generator), wherein one of the frequency for the Mark (first data) is altered with respect to space (second data) and the Band Pass Filter for reducing any of the harmonics associated with the carrier frequency (claimed wavelets altered) and shaping the harmonic of the lower frequency square waveforms and minimizing harmonics as in claims 2,4 and 6.

Therefore, it would have been obvious to one of an ordinary skill in the art to use the single cycle modulation technique, where the cycle starting at zero crossing and end 360 degree (see for 100% duty cycle data modulated carrier in figure 2(g)) for transmission higher baud rate where a lower carrier are restricted e.g. voice channel (see col. 2, lines 1-10 and col. 3, lines 34-44) at the time the invention was made.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (US patent number 5,789,991, or a record) in view of D.A Perreault (US patent number 3,555,428, newly cited) as applied to claim 3 above, and further in view of Reichman et al. (US Patent number 6,240,073, of a record).

Ishii and Perreault teach the claimed subject matter in claim 3 as indicated above with respect to the rejection of claim 3.

What Ishii and Perreault fail to teach is that the broadcasted signal being TDMA and FDMA as in claims 7 and 8 respectively.

Reichman for the same endeavor as the instant application and that of Ishii, teaches a transmission system capable of transmitting and receiving TDMA and FDMA signal using an FSK modulation (see col. Lines –68), where in the receiver receiving the

transmitted RF signal and down convert the signal to Intermediate Frequency (see front end down converter 224 in fig. 10).

Therefore, it would have been obvious to one of an ordinary skill in the art to use the down converter of Reichman in the receiver of Ishii to down convert the RF transmitted signal of Ishii to IF and broadcast the FSK modulated signals using TDMA or FDMA at the time the invention was made.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (US patent number 5,789,991) in view of Reichman et al. (US Patent number 6,240,073, of a record) and D.A Perreault (US patent number 3,555,428, newly cited).

Ishii teaches a transmission system having a transmitter (fig.3) and receiver (figs 6-9 and 11-13) wherein the transmitter comprising: a carrier frequency generator (see OSC in fig. 3 as in claim 5) for generating carrier wavelets each defined by 360 degrees and each cycle having zero crossing with zero energy at each zero crossing (see each of the sine waves modulated by the binary signals in fig. 5); and modulating the carrier frequency according to the information signal to be transmitted, and each of the carrier modulated with the 0's and 1's having a corresponding high and low frequency carrier,

claimed altered and not altered respectively (see for example col. 1, lines 10-37) as in claims 1,3,5,9 and 12; and transmitting (claimed broadcasting) the frequency shift keying modulated signal as in claims 9 and 12.

The claimed integer cycle in claims 9 and 12 includes whole number of cycles and reads on the modulated carriers in figure 5.

Further to claim 14, Ishii also teaches the Oscillator shown in fig. 3 for generating carrier frequency.

What Ishii fails to teach is that the change in frequency from the carrier frequency waveform to the altered wavelets starts at the zero degree phase angle and ends at 360 degree phase angle (best interpretation of the claimed language in light of the specification, single sign wavelet) as in claims 9 and 12; and the shaping circuit for shaping the harmonic of the lower frequency square waveforms and filtering as in claims 13 and 15.

Perreault for the same endeavor as the instant application and that of Ishii teaches a frequency shift keying modulator, where the two frequency, each having a single waveform (see a and b output from the frequency generator), wherein one of the frequency for the Mark (first data) is altered with respect to space (second data); the Band Pass Filter for reducing any of the harmonics associated with the carrier frequency (claimed wavelets altered) and for shaping the harmonic of the lower frequency square waveforms as in claims 13 and 15.

Therefore, it would have been obvious to one of an ordinary skill in the art to use the single cycle modulation technique, where the cycle starting at zero crossing and end

360 degree (see for 100% duty cycle data modulated carrier in figure 2(g)) for transmission higher baud rate where a lower carrier are restricted e.g. voice channel (see col. 2, lines 1-10 and col. 3, lines 34-44) at the time the invention was made.

Further to claims 9 and 12, Ishii also teaches that the receiver (see figures 11 and 12) for receiving the transmitted RF signal and reconstructing the original information, however he fails to teach that:

the received FSK signal is down converted to IF signal as in claims 9 and 12; and that the broadcasted signal being TDMA and FDMA as in claims 10,11,16 and 17.

Reichman for the same endeavor as the instant application and that of Ishii, teaches a transmission system capable of transmitting and receiving TDMA and FDMA signal using an FSK modulation (see col. Lines –68), where in the receiver receiving the transmitted RF signal and down convert the signal to Intermediate Frequency (see front end down converter 224 in fig. 10).

Therefore, it would have been obvious to one of an ordinary skill in the art to use the down converter of Reichman in the receiver of Ishii to down convert the RF transmitted signal of Ishii to IF and broadcast the FSK modulated signals using TDMA or FDMA at the time the invention was made.

Response to Amendment

9. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent numbers 3,454,718 and 4,081,748 issued to Perreault and Batz respectively disclose a transmission system having modulator for using signal and different frequencies for modulating the input data.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti (Jay) Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tesfaldet Bocure
Primary Examiner
Art Unit 2611

T.Bocure